UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
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Philadelphia, Pennsylvania 19103-2029

July 7, 2015

Ms. Cindy Bladey, Chief
Rules, Announcements, Directive Branch
Division of Administrative Services
Office of Administration
Mail Stop: OWFN-12-H08
US Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Draft Environmental Impact Statement for the Combined License (COL) for the Bell Bend Nuclear Power Plant, Luzerne County, Pennsylvania (NUREG-2179) CEQ #20150111

Dear Ms. Bladey:

In accordance with Section 102(2)(c) of the National Environmental Policy Act (NEPA), 42 U.S.C. § 4332(2)(c), Section 309 of the Clean Air Act, 42 U.S.C. § 7609, and the Council on Environmental Quality (CEQ) regulations, 40 CFR Parts 1500-1508, the United States Environmental Protection Agency (EPA), has reviewed the Draft Environmental Impact Statement (EIS) for the above referenced project and is providing the following comments. As you are aware, the Draft EIS was prepared in response to an application that was submitted to the US Nuclear Regulatory Commission (NRC) by Pennsylvania Power and Light (PPL) Bell Bend, LLC (now Talen Energy) for a combined construction permit and operating license (COL). Talen Energy has proposed to construct and operate a new nuclear power plant adjacent to the Susquehanna River in Salem Township, Luzerne County, Pennsylvania.

As part of the review process for draft EISs, EPA has developed a set of criteria for evaluating and rating draft environmental impact statements. This rating system provides a basis upon which EPA makes recommendations to the lead agency. EPA's rating system consists of a two-part alphanumeric evaluation. The alpha criterion evaluates the environmental impact of the proposed action. The numeric criterion evaluates the adequacy of the draft EIS. Based on this rating system, EPA has rated the Draft EIS for the COL for the Bell Bend Nuclear Power Plant as an EC-2. An EC rating means the review has identified environmental impacts that should be avoided to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. The numeric rating assesses the adequacy of the EIS. The 2 rating indicates that the

Draft EIS does not contain sufficient information to fully assess the environmental impacts that should be avoided to fully protect the environment. A copy of our rating system is attached, and can also be found at: http://www.epa.gov/compliance/nepa/comments/ratings.html. The basis for the EPA rating of an EC-2 are reflected in the attached comments. EPA is providing this rating and attached comments for NRC's consideration as it moves forward with its NEPA obligations.

As discussed in the attached comments, EPA's primary concerns include, assessment to Walker Run ecological flows, consumptive water for the power plant operations, assessment of Climate Change adaptions and the Environmental Justice analysis.

In addition to the attached comments, EPA has concerns with the suspensions of reviews by the Susquehanna River Basin Commission (SRBC) of consumptive water use, surface water withdrawal, and groundwater withdrawal applications and the suspension of NRC's nuclear reactor safety review. EPA considers the approvals of consumptive water use and NRC's nuclear reactor safety review to be critical to decision-making for this project. It is unclear that a decision on the Draft EIS should proceed without an analysis and determination that consumptive-use allocations are possible, and effects of withdrawal have been presented and reviewed by SRBC; it is appropriate to include the analysis in the EIS. Also, conclusion on assessment of reactor safety would be pertinent to the EIS and the NEPA Record of Decision (ROD). Though there may be minimal difference between reactors' water consumption and other function, it would be preferable for the public and decision-makers to be informed on the safety analysis and its conclusions while the project is in the NEPA process.

The NRC should be aware that on March 22, 2012, and April 16, 2012, the EPA sent letters to the US Army Corps of Engineer concerning the Clean Water Act (CWA) Section 404 permit application for the project, which was submitted prior to the Draft EIS. Given the importance of the aquatic resources at stake, the complexity of the project, and the potential impacts, EPA's comments to the Corps in response to the public notice for the project indicated that we are concerned that the Bell Bend project, as proposed, may result in substantial and unacceptable impacts to aquatic resources of national importance as covered in Part IV, paragraph 3(a), of the 1992 CWA Section 404(q) Memorandum of Agreement (MOA) between EPA and the Department of the Army. EPA appreciates the applicant's efforts to work with the regulatory agencies and to avoid and minimize impacts on site, however, the Draft EIS did not provide sufficient information to address our concerns raised in our comments to the Corps. EPA is committed to continuing to work with NRC and the applicant to assure that the proposed impacts resulting from this project are the least environmentally damaging practicable alternative, consistent with the CWA Section 404(b)(1) Guidelines and that significant degradation to Walker Run and the North Branch of the Susquehanna River is prevented.

EPA appreciates the opportunity to provide comments on this project. If you have any questions, please contact Mr. Kevin Magerr at (215)-814-5724.

Sincerely,

Jeffrey Lapp, Associate Director
Office of Environmental Programs

Enclosures

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Enclosure

DETAILED COMMENTS ON THE NUCLEAR REGULATORY COMMISSION'S DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE COMBINED LICENSE FOR THE BELL BEND NUCLEAR POWER PLANT (NUREG-2179)

Aquatic Resources and Water Consumption

1. According the Draft EIS, PPL (now Talen Energy) has determined that the combined dewatering activities related to the construction of the nuclear island structures, the cooling water towers, and the Essential Service Water Emergency Make-up System would reduce groundwater base flow to Walker Run by 201,600 gallons per day (page 4-14 Draft EIS). Further stated that the reduction is about 5% of the estimated annual average discharge rate for the Walker Run watershed. According to Pennsylvania Department of Environmental Protection, Walker Run has a designated use as a Cold Water and Migratory Fishery. The Pennsylvania Fish and Boat Commission has designated Walker Run as a Wild Trout Stream. Both designations underscores the value of the aquatic resource. By evaluating the groundwater reduction impact on an annual average impact does not go far enough in assessing the impact to the stream and associated wetlands. Evaluating the impact of reduced flow based on annual average flow is not protective of summer low flows on the aquatic resource. Impacts on summer flow could be as much as 30% of the normal stream flow. It is recommended that the reduced groundwater base flow be compared to the critical summer flows of Walker Run.

   Approaches to avoidance of the impact to base flow should be assessed. Contingencies and adaptive management for potential reduced flows should be presented.

2. Section 2.2.2, Section 2.3.2.1 and Section 7.2.1.1 provide an assessment of the consumptive mitigation for the cooling water demand for the operation of the Bell Bend Nuclear Power Plant. As stated in the Draft EIS, Talen Energy has applied for consumptive use permit from the Susquehanna River Basin Commission (SRBC) for 28 million gallons per day. The SRBC has made a prerequisite of permit approval that compensating water releases would need to come from upstream sources in the amount equal to the consumptive use at the Bell Bend Nuclear Power Plant. The Draft EIS provides a discussion on how Talen plans to meet this requirement and the potential environmental impacts. Talen's plan includes a series of offsets and trading of water resource allocations involving the water reallocation of PPL's Montour Steam Electric Station, expanding of the Ruston Mine water treatment facility and using water allocations related to PPL's Holtwood Dam. However, the Draft EIS does not indicate whether it has secured the critical allocation upstream of Bell Bend. In fact, the SRBC has suspended Talen Energy water consumption permit application as a result of lack of information in meeting the upstream water allocation requirement.

It would be prudent to delay a Final EIS or Record of Decision on the EIS until it is clear that information is available to complete the application to SRBC and that a consumptive use permit could be issued.

3. Impingement and entrainment – Susquehanna River Intake System. While the intake structure design will meet EPA design threshold of 0.5 fps for intake through-screen velocity, EPA recommends the analysis and incorporation of a fish return system. Any other Best Management Practices to reduce impacts to species' larval phases should be assessed and considered.

4. The Draft EIS should contain a table that clearly outlines the proposed temporary, permeant and conversion impacts to all wetland and streams on site for all phases of the project. EPA appreciates the applicant's efforts to work with the regulatory agencies to avoid and minimize impacts. When PPL first approached the resource agencies in June 2008, the site plan identified jurisdictional wetland impacts for approximately 100 acres (ac). By September 2008, PPL had reduced impacts to wetland to about 38 ac and were further reduced to approximately 27 ac by August 2009, and to approximately 11 ac in the present design as presented in the in the Draft EIS. Of the currently proposed impacts, 1.21 ac will be permanently filled and 9 ac will be converted from Palustrine Forested to Shrub/Scrub. Additionally the project would permanently affect 997 linear ft (0.21 ac) of onsite streams and temporarily affect 1,443 linear ft (0.34 ac) of onsite streams. It is EPA's hope that the NRC can continue to minimize impacts to aquatic resources, including direct and secondary impacts.

5. To ensure adequate wetland and stream compensation is achieved, a thorough assessment of the aquatic resources including their current condition, and functions and value to the watershed should be made using appropriate and acceptable methods. This assessment is necessary to identify the functional replacement needs of the streams and wetlands on-site and in the watershed and help determine appropriate compensatory mitigation. Any approved mitigation plan should include observable and measurable success criteria to which the success of the mitigation project can be measured, along with an adaptive management plan to adjust any problems that arise post mitigation construction. This information should be presented in a NEPA analysis and is essential for the CWA Section 404 review.

6. The project site boundary consists of approximately 2,055 acres, of which 975 acres would be altered to support construction and operation of the facility. Waterways on the site include the North Branch Susquehanna River, Lake Took-a-While, unnamed tributary to Lake Took-a-While, North Branch Canal, Walker Run and Eastern tributary to Walker Run plus associated wetland systems. EPA in its comment letters to the Corps (March 22, 2012, and April 16, 2012) stated that these aquatic resources are significant. As stated above (comment 1), baseflow to Walker Run may be jeopardized, with the potential loss of the cold water fishery resource. Appropriate analysis and approaches to avoid impacts is critical for maintain the ecological condition of the resource.

Additionally, as withdrawal allocations from the Susquehanna River have not been clearly identified, it is difficult to confirm that impacts to ecological flow and local habitat of the River will be unaffected by the water demand of the project. This analysis is needed to fully assess the potential environmental impacts, including direct, secondary, and cumulative impacts.

Climate Change

7. The Draft EIS provides a good understanding of the effects of climate change. It also provides estimates of greenhouse gas emissions of the proposed alternatives. These assessments are beneficial in order for the NRC to make an informed decision on the project and take into account the Council on Environmental Quality draft guidance (https://www.whitehouse.gov/administration/eop/ceq/initiatives/nepa/ghg-guidance) on Climate Change. However, the Draft EIS does not include a discussion on the Climate Change adaptation measures incorporated into the alternatives to determine resiliency. As stated in the Draft EIS, this project is in one of the most flood-prone areas in the United States. For this reason, EPA recommends that NRC include a discussion on how it will monitor any changes to the environment as a result of climate change that may affect the operation of the proposed alternatives and include the appropriate adaptation measures that may be required.

Environmental Justice

8. The application methodology used to identify the population of interest in the Environmental Justice analysis (minority population determination) is somewhat flawed. The threshold values using the 20% criterion (page 2-289) was miscalculated. The threshold values should be calculated by taking the percentage point of the block group plus 20% of the percentage point (example: Block group's county percentage of Native Americans is 5%, therefore, if the block group is equal to or great than (5 + (5*.20)) or 6%, it is a population of interest.)

   It is likely that a larger population would be identified using this methodology. If so, it is important that communication on the project has reached minority and/or low income communities and that the project has considered any impacts that might adversely affect the population.

9. The low-income population for Pennsylvania is 13.3% (http://quickfacts.census.gov/qfd/states/42000.html); that should be the threshold value for the low-income population determination (page 2-189, 2.6.2.3, Low-Income Populations).